Resume

Personal Details

Name:	**Rajit Sanghvi**
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Birth Date:	01. June. 1995
Nationality:	Indian
Family Status:	Single
GitHub:	https://github.com/sanghvirajit
Portfolio:	https://sanghvirajit19.github.io/Portfolio/

Research/ Work experience

10/2020 - current

Research Associate, Institute of Mathematics and Computer Science

Universität Koblenz-Landau, Koblenz, Germany.

- **Successfully researched** and developed **C++** code to perform the **PDE constrained optimization** problem using multigrid methods.
- Generated the **neural networks** from scratch in **Python** to understand the vanishing gradient problems.
- Ongoing research to develop the code to solve **PDE constrained optimization** problem as a **machine learning problem** using **Automatic differentiation** and **SciPy optimization python library**.

09/2021 - current

Student Trainee, Machine Learning Bootcamp

DataTalks.Club, Berlin

- Preparing the data and doing EDA, analyzing important features.
- Developed **Customer churn prediction** model using machine learning algorithm **regression**, and deployed the models on the **AWS cloud service** by creating **Docker containers** and using **AWS Elastic Beanstalk**.
- Developed **Credit risk analysis** model with **Decision Tree, XGboost, and random forest**, and deployed the models on the AWS cloud service by creating **Docker containers** and using **AWS Elastic Beanstalk**.

  Projects

03/2021 - current

Technical writer and contributor

Neptune.ai and **Medium**

- I write about Data science, machine learning and deep learning**.**
- https://neptune.ai/blog/early-stopping-with-neptune
- https://sanghvirajit.medium.com/

05/2020 - 09/2020

Internship, Research and Development

Simerics GmbH, Rottenburg am Neckar, Germany.

- **Developed Python library** for mixed timescale coupling using Python packages like **NumPy, Pandas, Matplotlib, and Seaborn.**
- Successfully Implemented numerical Fluid-Structure Interaction (FSI) coupling algorithms for FSI coupling adapters in Python and i**mproved** the overall Simulation time by **10%.**

05/2019 - 11/2019

Master's thesis, Department of Internal Combustion Engine Simulation.

IAV GmbH, Chemnitz, Germany.

- Developed and executed the model method succefully to investigate the Turbine Downstream to increase the turbine pressure ratio and thus the turbine performance.
- Effectively and efficiently performed meshing, and 3D- CFD simulations of the models using CFD-tool StarCCM+.

10/2018 - 03/2019 **Internship, Industrial Hydraulics Department.**

Bosch Rexroth AG, Lohr am main, Germany.

- **Optimized** the shape of hydraulic valves and pumps, and decreased the pressure drop by **18%** using the adjoint shape optimization method with CFD simulation.

09/2016 - 09/2017 **Design Engineer, Hydraulic Control Department.**

Bosch Rexroth (India) Pvt Ltd.

- Trained to design and test industrial hydraulic valves.
- Created 2D/3D technical drawings with CAD programs.

Education

10/2017 - 09/2020 **M.Sc. Computational Engineering**
Ruhr-Universität Bochum, Germany
Abschlussnote: 1.6

06/2012 - 03/2016 **Bachelor of Technology in Mechanical Engineering**
Indus Universität, India
Abschlussnote: 9.22/10

IT/ EDV Knowledge

- **Programs**: MS Word, MS Excel, MS Power Point – very good.
- **Machine Learning – Frameworks**: Keras, TensorFlow, PyTorch, und Scikit-Learn – good.
- **Programming Languages**: Python – Very good, C++ - Very good, SQL – good, and Matlab – good.
- **Linear Algebra und Visualization:** Python-Library – Numpy, Pandas, Matplotlib, Seaborn – very good.
- **Web-based Visualization**: Interactive Dashboard with Plotly Python, und Dash – good.
- **Statistics:** Python, SPSS – good.
- **Data-based management**: RDBMS - PostgreSQL – good.
- **Software/Tools:** Docker - good
- **Cloud services:** AWS Elastic Beanstalk - good
- **Data accumulation und - Visualization**: Web-Scraping with Beautiful Soup – good.
- **Operating systems**: Window, Linux – very good.

Languages

- **German** – B1, Fluent in speaking and writing.
- **English** – Mother tongue.

Certifications

Oct 2021 **IBM certified Data Science Professional**

- Capstone Project

May 2021 **The Complete SQL BootCamp 2021 – Udemy**

Volunteering Experience

02/2018 - 03/2019 **Vice President, Student Council**
Ruhr-Universität Bochum, Germany

Awards

2017 **Gold Medal**
Indus Universität, India

- Awarded for academic excellence in the bachelor's degree program.

Koblenz, 10/2021 

Place, Date - Singnature